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EXAMINER	
COLILLA, DANIEL JAMES	
ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/058,813	SMITH, DANIEL E.	
	Examiner	Art Unit	
	Dan Colilla	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15 and 26-28* is/are allowed.

6)☒ Claim(s) *1-14 and 16-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5,9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. It has been noticed that the considered copy of the 1449 submitted on 7/10/02 lacked initials next to one of the cited references. This matter has been corrected and another copy of the 1449 is being supplied in addition to a considered copy of the 1449 submitted on 9/10/03.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the transverse holes (as recited in claims 1, 16 and 21) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 21-25 are objected to because of the following informalities: in line 2 of claim 21, applicant uses the term, "traverse." However, considering the previously recited claims, and the context of the claim, it appears that applicant has intended to recite the term, --transverse.-- Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al.

With respect to claim 1, Sugimoto et al. discloses a printing system including a web guide 46, a preprinting section 32,36, a post-printing section 34,38, and a printing section 20,40 which includes a removable platen 40 as shown in Figures 2-3 of Sugimoto et al.

With respect to claim 2, the platen 40 has a flat upper surface.

With respect to claim 5, Sugimoto et al. discloses a heater 52 for heating the platen 40.

With respect to claim 12, the area formed when the platen 40 is removed could be considered a trough.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Moore et al.

With respect to claim 3, Sugimoto et al. discloses the claimed printing system except for the heating of the preprinting section. However, Moor et al. teaches a preprinting section 104 which includes heater 72 for heating the substrate before it enters the printing section. It would have been obvious to combine the teaching of Moore et al. with the printing system disclosed by Sugimoto et al. for the advantage of conditioning the substrate so that it more readily absorbs printing ink.

With respect to claim 4, Moore et al. teaches that the heater 72 includes resistive trace patterns (Moore et al., col. 41-45).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Wotton et al. (2002/0071016).

Sugimoto et al. discloses the claimed printing system except that it is not known to the examiner what type of heater is used to heat the platen. However, Wotton et al. teaches that it is known to use heating elements 72 for heating a platen 42 (Wotton et al., page 4, paragraph 61). It would have been obvious to combine the teaching of Wotton et al. with the printing system disclosed by Sugimoto et al. for the advantage of the preheating and posting heaters 70 that can carry out preprinting and post-printing operations on the substrate.

9. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Erickson et al.

With respect to claims 7-8, Sugimoto et al. discloses the claimed printing system except for the convex curved post-printing section. However, Erickson et al. teaches a printing system

with a convex curved post-printing section 518,516 as shown in Figure 2 of Erickson et al. Portion 516 of this curved surface is a heater. It would have been obvious to combine the teaching of Erickson et al. with the printing system disclosed by Sugimoto et al. for the advantage of improving the bond of the ink to the substrate (Erickson et al., col. 15, lines 31-40).

With respect to claim 9, Erickson et al. teaches that the heating can be provided by resistance heating or any other means known in the art. While a resistance heater could comprise a single element, there is no unobviousness in providing a plurality of known elements in order to carry out the same function.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view Koyama et al.

Sugimoto et al. discloses the claimed system except for the convex curved post-printing section. However, Koyama et al. teaches a printing system with a convex curved post-printing section 14 as shown in Figure 1 of Koyama et al. It would have been obvious to combine the teaching of Koyama et al. with the system disclosed by Sugimoto et al. for the advantage of providing a surface that is less likely to stress the printing medium as it is rewound onto roller 44.

11. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Spehrley, Jr. et al.

With respect to claim 10, Sugimoto et al. discloses the claimed printing system except for the vacuum source. However, Spehrley, Jr. et al. teaches a printing system with a vacuum source

21 for generating a suction of the substrate 10 as shown in Figure 2 of Spehrley, Jr. et al. It would have been obvious to combine the teaching of Spehrley, Jr. et al. with the printing system disclosed by Sugimoto et al. for the advantage of preventing the substrate from being moved out of the printing plane.

With respect to claim 11, Sugimoto et al. discloses a first slot and second slot in the preprinting and post-printing sections respectively as shown in Figure 2 of Sugimoto et al. When combined with Spehrley, Jr. et al., the vacuum source would draw air from these slots.

12. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Akaha.

With respect to claims 13-14, Sugimoto et al. discloses the claimed printing system except for the drain. However, Akaha teaches a printing system with a drain 15 that absorbs ink as shown in Figure 7 of Akaha. It appears that these terms are broad enough such that both can be applied to absorber 15. It would have been obvious to combine the teaching of Akaha with the printing system disclosed by Sugimoto et al. for the advantage of ridding the printing area of excess ink that could potentially smear the printing substrate.

13. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes in view of Onishi.

With respect to claim 16, Rhodes discloses the claimed method of guiding a substrate except for the transverse openings. Rhodes discloses a method of guiding a substrate including the steps of guiding the substrate 16 through a preprinting section between rollers 42 and 48 as

shown in Figure 1 and applying a tension to the substrate 16 with belt 32 and rollers 42 and 44. Rhodes further discloses the step of applying a vacuum to cavity 50 through the belt 32. Onishi discloses a printing medium including perforations 2, some of which are transverse to a longitudinal direction of the printing medium as shown in Figure 15 of Onishi. It would have been obvious to combine the teaching of Onishi with the method of guiding a substrate disclosed by Rhodes for the advantage of over-printing the margin of the actual image in order to achieve a resulting image without any white margins.

With respect to claim 17, Rhodes discloses a heated platen 29 (Rhodes, col. 3, lines 61-62).

With respect to claims 18-19, Rhodes discloses that separate heaters may be mounted upstream and downstream of the print zone 34 (Rhodes, col. 3, lines 64-66).

14. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Onishi and Morita.

With respect to claim 16, Sugimoto et al. discloses the claimed method except for the transverse openings in the substrate and the step of applying a vacuum. Sugimoto et al. discloses guiding a substrate 22 through a preprinting section defined by rollers 32 and 36 and applying a tension to the substrate 22 through the feed rollers 36 and 38 cooperating with the pressure rollers 32 and 34 as shown in Figure 2 of Sugimoto et al. Figure 3 of Sugimoto et al. shows the step of removing a platen from the printing section forming a gap below the substrate 22. Onishi discloses a printing medium including perforations 2, some of which are transverse to a

longitudinal direction of the printing medium as shown in Figure 15 of Onishi. It would have been obvious to combine the teaching of Onishi with the method of guiding a substrate disclosed by Sugimoto et al. for the advantage of over-printing the margin of the actual image in order to achieve a resulting image without any white margins. Morita teaches a method of guiding a substrate including the step of applying a vacuum to the substrate with a fan 128. It would have been obvious to combine the teaching of Morita with the method of guiding a substrate disclosed by Sugimoto et al. for the advantage of preventing the substrate from lifting off of the platen.

15. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akaha in view of Onishi.

With respect to claim 21, Akaha discloses a method of guiding a substrate except for the substrate formed with plural, transverse openings. Akaha discloses a method including guiding the substrate through a preprinting section 8 and moving the substrate over a gap 11 which catches ink that is not printed on the substrate. Onishi discloses a printing medium including perforations 2, some of which are transverse to a longitudinal direction of the printing medium as shown in Figure 15 of Onishi. Any ink that passes through the perforations would fall into the gap thus minimizing excess ink from forming underneath the substrate. It would have been obvious to combine the teaching of Onishi with the method of guiding a substrate disclosed by Akaha for the advantage of over-printing the margin of the actual image in order to achieve a resulting image without any white margins.

With respect to claim 22, the feeding forces applied by rollers 8 and 9 will apply a tension to the substrate.

16. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akaha in view of Onishi, as applied to claims 21-22 above, and further in view of Shida.

Akaha in view of Onishi discloses the claimed method of guiding a substrate except for the step of heating the substrate in the printing section. However, Shida teaches guiding a substrate through a printing system which includes the step of heating the substrate 10 with heater 6 located below the printhead 30 as shown in Figure 1 of Shida. It would have been obvious to combine the teaching of Shida with the method of guiding a substrate disclosed by Akaha in view of Onishi for the advantage of drying the printing ink so that it does not smear on the substrate.

17. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akaha in view of Onishi, as applied to claims 21-22 above, and further in view of Szlucha et al.

With respect to claim 23, Akaha in view of Onishi discloses the claimed method of guiding a substrate except for the step of heating the substrate before printing. However, Szlucha et al. teaches heating a substrate 16 with a pre-heating section 52 of heater 50 before printing as shown in Figure 1 of Szlucha et al. It would have been obvious to combine the teaching of Szlucha et al. with the method of guiding a substrate disclosed by Akaha in view of Onishi for the advantage or pre-conditioning the substrate for receiving ink (Szlucha et al., col. 2, lines 1-14).

With respect to claims 24-25, the heater 50 disclosed by Szlucha et al. heats the substrate as it passes under the printhead and in the sheet feed path after the printhead as shown in Figure 1 of Szlucha et al.

Allowable Subject Matter

18. Claims 15 and 26-28 are allowed.

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kudo et al., Kageyama et al and Otsuki are cited to show other examples of a printer with a gap below the printhead for collecting ink.

Response to Arguments

20. Applicant's arguments filed 9/10/03 have been fully considered but they are not persuasive of any error in the above rejection.

With respect to claims 1-14, applicants invention is directed towards a printing system which includes a web guide which guides a substrate. Applicant is not reciting the substrate as part of the claim, therefore limitations recited with respect to the substrate are not given any patentable weight in the claims. Thus the rejection of these claims remains unchanged.

With respect to the remaining claims (excluding any allowed claims), the patent to Onishi has been included in the above rejection to provide the transverse openings in the substrate.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (703) 308-2259. The examiner can normally be reached M-F, 8:30-5:30. Faxes regarding this application can be sent to (703) 872 - 9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (703)305-6619. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Dan Colilla
Primary Examiner
Art Unit 2854

December 18, 2003